

IN THE CLAIMS:

Claim 1 (currently amended): A carbonator, comprising:

~~a an oblong shaped~~ carbonator housing having a reduced vertical profile defining an ~~oblong shaped~~ interior volume;

a liquid inlet port disposed on the housing for inletting a liquid from a liquid source into the interior volume;

a gas inlet port disposed on the housing for inletting gas from a gas source into the interior volume; and

an exit port disposed on the housing.

Claim 2 (currently amended): The carbonator according to claim 1, wherein ~~the oblong shaped housing creates an increased gas/liquid interaction area for absorption by the liquid~~ a vertical dimension of a cross section of the housing is one of the shorter dimensions of the housing.

Claim 3 (currently amended): ~~The carbonator according to claim 1, wherein the gas is carbon dioxide~~ The carbonator according to claim 2, wherein the cross section is oblong-shaped.

Claim 4 (currently amended): ~~The carbonator according to claim 1, wherein the liquid is water~~ The carbonator according to claim 2, wherein the cross section is oval shaped.

Claim 5 (currently amended): ~~The carbonator according to claim 2, wherein the mixture exiting the carbonator is carbonated water~~ The carbonator according to claim 2, wherein the cross section is semi-oblong shaped.

Claim 6 (currently amended): ~~The carbonator according to claim 1, wherein the housing comprises an oblong shell~~ The carbonator according to claim 1, wherein the carbonator is disposed within a cold plate.

Claim 7 (currently amended): ~~The carbonator according to claim 6, wherein the oblong shell provides an increased exterior surface area, thereby increasing the heat removal capability~~ The carbonator according to claim 6, wherein the cold plate is disposed at an incline.

Claim 8 (currently amended): ~~The carbonator according to claim 6, wherein the oblong shell provides a reduced vertical height component, thereby decreasing the surrounding cold plate thickness requirement~~ The carbonator according to claim 7, wherein the carbonator is disposed parallel with the cold plate along the incline, and further wherein the reduced vertical profile housing creates an increased fluid/gas interaction area when angled.

Claim 9 (currently amended): ~~The carbonator according to claim 1, wherein the liquid and gas mixture is removed through the exit port~~ The carbonator according to claim 2, wherein the wider cross section provides an increased exterior surface area.

Claim 10 (previously presented): A carbonator, comprising:

- a housing;

- a film generator assembly disposed in the housing, the film generator assembly including a hemispherical redirector coupled to a cylindrical film generator, wherein the hemispherical redirector includes an inner surface, and further wherein, the cylindrical film generator includes apertures to aid the liquid in taking the shape of a film;

- a gas inlet port disposed on the housing, the gas inlet port coupled with a gas source for communicating gas into the housing;

- a liquid inlet port disposed on the housing, the liquid inlet port coupled with a liquid source for communicating liquid onto the inner surface of the hemispherical redirector, wherein the fluid contacts the inner surface and is redirected onto the cylindrical film generator, thereby forcing the

liquid to film as the liquid moves down the cylindrical film generator, thereby maximizing the liquid/gas interaction area; and

an outlet port disposed on the housing for delivery of a liquid/gas mixture exterior to the housing.

Claim 11 (original): The carbonator according to claim 10, wherein the gas is carbon dioxide.

Claim 12 (original): The carbonator according to claim 10, wherein the liquid is water.

Claim 13 (original): The carbonator according to claim 10, wherein the mixture exiting the carbonator is carbonated water.

Claim 14-17 (canceled).

Claim 18 (previously presented): A method of increasing the surface area of a liquid for mixing with a gas, comprising:

- a. placing a film generator assembly in a chamber filled with a pressurized gas, wherein the film generator assembly comprises a hemispherical redirector coupled with a cylindrical film generator including apertures;
- b. spraying the liquid onto an inner surface of a hemispherical redirector;
- c. redirecting the sprayed fluid towards the cylindrical film generator;
- d. generating a film as the liquid moves over the cylindrical film generator; and
- e. passing the film over the apertures to aid film generation.

Claim 19 (previously presented): The method according to claim 18, further comprising:

- f. absorbing the higher pressure gas into an increased exposed surface area of the liquid.

Claim 20-32 (canceled).

Claim 33 (new): A carbonator, comprising:

a carbonator housing defining an interior volume, wherein a width of a cross section of the housing is greater than a height of the cross section;

a liquid inlet port disposed on the housing for inletting a liquid from a liquid source into the interior volume;

a gas inlet port disposed on the housing for inletting gas from a gas source into the interior volume; and

an exit port disposed on the housing.

Claim 34 (new): The carbonator according to claim 33, wherein the cross section is oblong shaped.

Claim 35 (new): The carbonator according to claim 33, wherein the cross section is oval shaped.

Claim 36 (new): The carbonator according to claim 33, wherein the cross section is semi-oblong shaped.

Claim 37 (new): The carbonator according to claim 33, wherein the carbonator disposed within a cold plate.

Claim 38 (new): The carbonator according to claim 37, wherein the cold plate is disposed at an incline.

Claim 39 (new): The carbonator according to claim 38, wherein the carbonator is disposed parallel with the cold plate along the incline, and further wherein the reduced vertical profile housing creates an increased fluid/gas interaction area when angled.

Claim 40 (new): The carbonator according to claim 33, wherein the wider cross section provides an increased exterior surface area.